

REMARKS

Applicant requests favorable reconsideration of this application in view of the following remarks. Of claims 1-6 that were pending in application, claims 3-6 remain withdrawn from consideration and claims 1 and 2 were rejected in the Office Action. No amendments are presented herein and, therefore, this response presents no new issues. Accordingly, entry and consideration of this response is respectfully requested.

1. Rejection of Claims 1 and 2

The Examiner rejected claims 1 and 2 under 35 U.S.C. § 103(a) as allegedly being obvious when considering U.S. Patent No. 5,806,174 (“Itoh”) in view of U.S. Patent No. 5,086,559 (“Akatsuchi”). For at least the following reasons, Applicant respectfully traverses this rejection.

As previously presented, claim 1 (*i.e.*, the claim from which claim 2 depends) recites a machine for placing components on a printed circuit board. This machine includes, among other possible things: (a) a transport device for transporting printed circuit boards in an X-direction; and (b) a Y-slide that has at least two placement components thereon. Whereas the Y-slide is drivable as a whole in the X-direction, each of the placement heads on the Y-slide is independently drivable in the Y-direction.

In rejecting claim 1 the Examiner admits: “Itoh does not mention that the structure of the transport device can transport the circuit boards in an X-direction, or a direction that is parallel to the drivable direction of movement of the Y-slide.” *See* Office Action at p. 2. To cure this admitted deficiency of Itoh, the Examiner turns to Akatsuchi. The Examiner’s reliance on Akatsuchi is, however, misplaced.

Akatsuchi teaches two separate and distinct X/Y moving tables 8. Each of the tables 8 is independently drivable. Moreover, the singular pick-and-place unit 10 associated with each of the tables 8 is independently drivable in the X and Y directions by the associated X-axis table 8a and Y-axis table 8b. As a result, Akatsuchi fails to teach or suggest a singular Y-slide that includes at least two placement heads that are independently drivable in one direction (*e.g.*, Y-direction) and dependently drivable in another direction (*e.g.*, X-direction). As Akatsuchi fails to teach or suggest such a Y-slide, one of ordinary skill in the art, upon studying Itoh’s mounting apparatus A, would not be motivated to incorporate the teachings of Akatsuchi into Itoh’s mounting apparatus A. Accordingly, no proper motivation exists to combine the teachings of Itoh and Akatsuchi to reject claim 1.

In addition, even assuming, *arguendo*, that one of ordinary skill in the art were motivated to incorporate Akatsuchi's conveyor 5 and positioning units 4 into the Itoh's mounting apparatus A, there is no teaching or suggestion that the conveyor would transport printed circuit boards ("PCBs") in a direction parallel to the direction (*e.g.*, X-direction) in which the Y-slide moves. Rather, as Akatsuchi's conveyor 5 successively brings the PCBs 3 to each of the mounting tables 8, if one of ordinary skill in the art were to apply such teaching to the Itoh's mounting apparatus A, the conveyor would be positioned to successively bring PCBs to each of Itoh's fitting heads 4, 5 (*i.e.*, along what appears in Figure 1 to be rails that support the mounting parts n); such a direction of transport would, contrary to the above-mentioned limitations of claim 1, be perpendicular to the direction of movement (*i.e.*, X-direction) of the Y-slide. Moreover, even if one of ordinary skill in the art wanted to apply Akatsuchi's conveyor belt in such a manner that it would transport PCBs in a direction parallel to the direction of transport of Itoh's Y-slide, such an arrangement appears to be precluded by the positioning of Itoh's support m (Fig. 1). Accordingly, for this additional reason, one of ordinary skill in the art would not be motivated to apply Akatsuchi's conveyor 5 to Itoh's mounting apparatus A.

In light of the foregoing, it is clear that the combination of Itoh and Akatsuchi fails to teach or suggest at least the above-mentioned limitations of claim 1. Accordingly, the combination of Itoh and Akatsuchi can not be used to reject claim 1, or any claim dependent thereon, under 35 U.S.C. § 103(a). Moreover, as claim 2 depends from claim 1, claim 2 is also allowable over the combination of Itoh and Akatsuchi, even without regard to the other patentable limitations recited therein. However, as Itoh and Akatsuchi both teach a total of only two placement heads (4, 5 in Itoh and 10, 10 in Akatsuchi), neither reference teaches or suggests the limitations of claim 2, which limitations require at least two Y-slides each of which has at least two placement heads. Claim 2 is, therefore, allowable over Itoh and Akatsuchi for at least this additional reason. A withdrawal of the rejection of claims 1 and 2 under 35 U.S.C. § 103(a) is, therefore, both warranted and earnestly solicited.

2. Conclusion

For the aforementioned reasons, claims 1 and 2 are now in condition for allowance. A Notice of Allowance at an early date is respectfully requested. The Examiner is invited to contact the undersigned if such communication would expedite the prosecution of the application.

Respectfully submitted,

Date August 10, 2006

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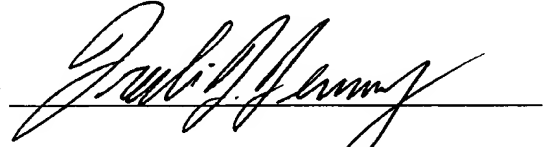
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THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED REGARDING THIS APPLICATION UNDER 37 C.F.R. §§ 1.16-1.17, OR CREDIT ANY OVERPAYMENT, TO DEPOSIT ACCOUNT NO. 19-0741. SHOULD NO PROPER PAYMENT BE ENCLOSED HERewith, AS BY A CHECK BEING IN THE WRONG AMOUNT, UNSIGNED, POST-DATED, OTHERWISE IMPROPER OR INFORMAL OR EVEN ENTIRELY MISSING, THE COMMISSIONER IS AUTHORIZED TO CHARGE THE UNPAID AMOUNT TO DEPOSIT ACCOUNT NO. 19-0741. IF ANY EXTENSIONS OF TIME ARE NEEDED FOR TIMELY ACCEPTANCE OF PAPERS SUBMITTED HERewith, APPLICANT HEREBY PETITIONS FOR SUCH EXTENSION UNDER 37 C.F.R. § 1.136 AND AUTHORIZES PAYMENT OF ANY SUCH EXTENSIONS FEES TO DEPOSIT ACCOUNT NO. 19-0741.